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ABSTRACT

A study addressed the question, "If a teacher exhibits enthusiasm while instructing, what will be the effect upon measures relating to student achievement?" Student variables studied in relationship to teacher enthusiasm were (1) attendance; (2) interest in school and in the particular subject; (3) educational motivation; and (4) student rating of vocational teachers. The literature suggests these factors are related to some extent. Methodology involved having forty-three inservice vocational teachers submit two fifteen-minute videotaped teaching sessions wherein trained raters could assess the independent variable of teacher enthusiasm using eight carefully described criteria. Students at those sessions were tested, using appropriate instruments, for the selected factors, and a Product-Moment correlation statistic was used on the data. Conclusions, based on data analysis, were that no significant correlation exists between teaching enthusiasm and the selected factors with the exception of student rating of instructors, where the coefficient was marginally significant. (CP)

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FINAL REPORT

A Study of the Relationship of Teacher Enthusiasm to Salient, Selected Variables Influencing Achievement in the Vocational Laboratory

(Project No. 83-9003)

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Project No. 83-9003: A Study of the Relationship of Teacher Enthusiasm to Salient, Selected Variables Influencing Student Achievement in the Vocational Laboratory

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The purpose of this project was to investigate the influence teaching enthusiasm has upon several factors that are known to have a positive effect upon student achievement.

Hypotheses

1. There is no relationship between teaching enthusiasm and the students' attendance record.
2. There is no relationship between teaching enthusiasm and the students' interest in school.
3. There is no relationship between teaching enthusiasm and the students' educational motivation.
4. There is no relationship between teaching enthusiasm and the students' interest in the subject.
5. There is no relationship between teaching enthusiasm and the students' rating of their vocational instructors.

Results

1. All of the above hypotheses were not rejected at the .05 level of significance.
2. The relationship between teaching enthusiasm and the Students' rating of their vocational instructors was marginally significant ($r = .248$, $p = .054$).
3. With the exception of the relationship between the students' rating of their instructors and teaching enthusiasm, all of the remaining coefficients indicated an absence of any relationship (range: $r = -.082$ to $.197$).
4. Student intelligence, used as a constant, exhibited no influence upon any of the hypotheses, with the possible exception of Interest in School.

5. The coefficients* and levels of significance for all of the hypotheses follows:

Enthusiasm vs. attendance

$r = -.082$; $p = .301$
$r_{12.3} = -.069$ $p = .300$

Enthusiasm vs. Interest in School

$r = .014$ $p = .464$
$r_{12.3} = .13$ $p = .192$

Enthusiasm vs. Achievement Motivation

$r = .197$ $p = .102$
$r_{12.3} = .188$ $p = .102$

Enthusiasm vs. Interest in the Subject

$r = -.037$ $p = .406$
$r_{12.3} = -.030$ $p = .406$

Enthusiasm vs. Rating of Vocational Instructors

$r = .248$ $p = .054$
$r_{12.3} = .240$ $p = .054$

*student intelligence was the factor used in the partial correlations.

Audience

The final report may be of interest to anyone interested in a study of teacher characteristics, process-product studies, or student achievement.

Publications and Available Materials

The Final Report

INTRODUCTION

The average classroom teacher is responsible for the education of between 80 and 150 different students each school year. Perhaps the only commonalities from one student to the next is the fact that they are either male or female or, within a year or two, the same age. Apart from these, no two are exactly alike. Their home-lives and circle of friends are different, religion, race, and educational status effect differences in each, and possibly the greatest single factor differentiating one student from another is the uniqueness of their minds. A teacher faces quite a formidable task in attempting to inspire further study (or even any study at all) or impressing his/her students with the importance of retaining subject matter information for future recall.

The teacher faces students with often vastly different likes and dislikes and the success with which he/she effects the desired behavioral changes greatly depends upon a command of pedagogical skills. Who do some students seem to enjoy the class and consistently earn higher grades while others cannot wait for the class to end? Is there something the teacher did or did not do? Something he/she failed to say? Teachers themselves are as different as their students--age, sex, amount of background training, level

of their degrees, and years of experience are only a few of the identifiable variables. As an added dimension, each student must face perhaps as many as ten teachers daily. Considering the interaction of all these diverse variables, the education of children is an intricate, often precise, and constantly evolving process.

As many as nineteen teaching strategies have been identified and implemented to assist educators in efficiently matching the three global variables of student, teacher, and school/subject matter environment. These strategies range from brainstorming and guided discovery to independent study and the use of external resource persons. With such an array of teaching strategies at hand, one would think that the problem of individual differences within the classroom would be vitiated.

Unfortunately, this is not the case. Students continue to demonstrate higher achievement for one teacher rather than another or from one subject area to another subject area. Perhaps the reason lies not with the various strategies themselves, but rather in the behavior of the teacher in employing the strategies. One research shortcoming is the failure to observe teaching activities. Perhaps a viable reason could be the difficulty in objectively measuring affective pedagogical skills, much less the impact of these attitudes or behaviors upon the students. Yet one would be hardpressed to deny that a

teacher's behavior or attitude has a significant impact upon the learning enviornment of a classroom. What qualities constitute teaching demeanor that might sufficiently reinforce learning and impress their students? The teacher's dress, vocabulary, command of subject matter information, warmth, directiveness, enthusiasm, and dogmatism are but a few that can be identified. (Dunkin and Biddle, 1974; Ryans, 1960)

This study investigated only one of these qualities or variables--enthusiasm--for significance. Writes Emerson, "nothing great was ever achieved without enthusiasm." Although perhaps few classroom teachers aspire to greatness, enthusiasm may represent the difference between a mediocre and a successful teacher.

STATEMENT OF THE PROBLEM

The problem of this study was, "what is the relationship of enthusiastic classroom teaching upon selected factors that are known to influence student achievement?" If a vocational teacher exhibits enthusiasm while instructing students, what will be the result upon those measures that relate to students' vocational achievement?

Specifically, this study answered the following questions: (1) What is the relationship between enthusiastic teaching and the students' attendance record? (2) Does a relationship exist between teaching enthusiasm and the

students' interest in school? (3) Is there a relationship between teaching enthusiasm and the students' educational motivation? (4) Is there a relationship between teaching enthusiatically and the students' interest in the subject? (5) Is there a relationship between teaching enthusiasm and the students' rating of their vocational instructors?

STATEMENT OF THE HYPOTHESES

Based upon the questions asked in the problem statement and a review of the literature, the following research hypotheses were tested:

H_1: A positive relationship exists between enthusiastic teaching and the students' attendance record.

H_2: A positive relationship exists between enthusiastic teaching and the students' interest in school.

H_3: A positive relationship exists between enthusiastic teaching and the students' educational motivation.

H_4: A positive relationship exists between enthusiastic teaching and the students' interest in the subject.

H_5: A positive relationship exists between enthusiastic teaching and the students' rating of their vocational instructors.

REVIEW OF THE LITERATURE

Unruh (1968) found that raters freely described the behaviors of teachers with higher achieving students as

enthusiastic, vitalistic, and energetic. In the fixed response segment of his study, the traits such as enthusiasm and energy correlated significantly with the teachers of nigh achieving students. This suggests in part at least, the variable enthusiasm has a positive relationship towards student achievement. Mastin (1963) found that whether the enthusiastic lesson was taught first or second compared to the dull lesson or wether the lesson pertained to the topic of ancient Egypt, Rome, or Pompeii, the class mean on an achievement test was higher for nineteen of the twenty classes taught enthusiastically.

Additionally, several researchers have identified many factors that appear to influence achievement. Unquestionably, the factor studied in the greatest detail by the most researchers is socio-economic status (SES). Of the fifteen studies uncovered, nearly all conclude that SES is strongly related to achievement. (Chumbly, 1976; Summers, 1977; Ramon, 1976; Walter, 1977; Moorehead, 1977 and others.) Other studies cast doubt upon the interpretations, manipulation of the data, or find weak relationships. (Berliner, 1976; White, 1976 and others.)

When studying any influences or interactions between attendance and motivation, two researchers uncovered similar relationships. (Trammel, 1977; Williams (1976)

The latter researchers postulated that irregular classroom attendance tends to affect achievement for problem and non-problem students alike. Summers (1977) strongly asserted that all types of students at all educational levels experience higher rates of achievement growth if they are attending more often.

Potter (1973) experienced a modest relationship between a student's rating of his/her teacher and the student's achievement growth. Caulfield (1976) found that motivation is important in distinguishing who will or will not achieve. Three researchers (Murray, 1977; Wimbush, 1976; and McCarthy, 1977) studied motivation via classroom behavior. Among the results, they found higher achieving and thus motivated students who volunteered more answers to questions, and faced their work with a better attitude.

Lastly, Eisenhart (1976) and McCarthy (1977) found direct relationships between academic achievement and interest in school and/or interest in the subject. In addressing some sort of self-fulfilling prophecy, Eisenhart found that increased advances in academic achievement caused increased student interest levels.

METHODS

SUBJECTS OF THE STUDY

The subjects of the study were inservice vocational teachers. The Subjects were recruited from a pool of certification candidates enrolled in Program VITAL (Vocational Intern Teaching, Alternate Learning) at Temple University. Although each Subject was an inservice teacher, all were relatively new to teaching. Most had extensive industrial/business occupational experience and had decided to enter the teaching field after several years of working at a career removed from education. By enrolling in Program VITAL, they were working to demonstrate pedagogical competencies required by Temple University before recommending candidates for state certification.

The Subjects were of varying ages representing both sexes and all races. The Subjects, in addition, had fewer than five years of teaching experience. All of the Subjects, numbering 43, were teaching in area vocational-technical schools representing rural and suburban communities adjacent to and near the large metropolitan area of Philadelphia, Pennsylvania.

TASKS INVOLVED

The tasks involved by the Subjects were performed

in the classrooms and included those performances required by Program VITAL. Each Subject was asked to submit two videotaped lessons and to ensure some degree of consistency, the tapes submitted were for two separate lessons, not necessarily related. The taped lesson was to last for at least fifteen minutes in length with the Subject visible and predominant for most of the presentation. Ultimately, most lessons involved explaining theory or demonstrating a vocational skill.

In addition to videotaping their lessons, the Subjects were asked to permit and assist the FRPs in administering the instrument designed to elicit data needed for the hypotheses variables. The instrument was to be administered to the same class present during the lesson videotaping, but not necessarily at the same time.

INDEPENDENT VARIABLE

The independent variable in this study is the degree of teaching enthusiasm exhibited in the vocational classroom. The Subjects in the study were classified as to their degree of enthusiasm based on their performance on the two videotaped lessons. They earned an enthusiasm value after being observed by five trained raters, persons experienced in the use of the video-tape recorder as a teaching tool.

To objectively measure enthusiasm from a common perspective, the raters utilized an observer rating scale based on an instrument constructed and used by Collins (1976). With this instrument, a Subject considered unenthusiastic or dull would receive a value of eight; while in contrast, a Subject exhibiting the highest amount of enthusiasm would receive a value of 56.

DEPENDENT VARIABLES

There are five dependent variables in this study representing each hypothesis. The students': (1) shop or classroom attendance record, (2) interest in school, (3) educational motivation, (4) interest in vocational subjects, and (5) overall rating of their ship instructors, i.e., the Subjects.

A sixth variable, student intelligence, was also used in the study. While not expressed in the hypotheses per se, the utilization of intelligence was for the purpose of equating all students on some common factor.

INSTRUMENTATION

To adequately measure both the dependent and independent variables, five separate instruments were located--four for the dependent variables and one for the independent variable. In addition, to provide a common base for examining the influence of student

intelligence upon each hypothesis, an intelligence test was used.

Enthusiasm Observation Rating Scale

The instrument used to measure the degree of teaching enthusiasm was designed by Collins (1976). Eight criteria were identified: (1) vocal delivery, (2) eyes, (3) gestures, (4) body movement, (5) facial expression, (6) word selection, (7) acceptance of ideas and feelings, (8) overall energy level. Precise descriptors identified what constituted each.

Attendance

The students' attendance record was obtained by having each cite the number of days absent he/she was absent from school since the beginning of the year. This information was requested along with the usual age, sex, grade, and so forth, and was entered on the instrument designed to gather the data for the remaining hypotheses variables.

Insterest in School

The instrument used to measure a student's interest in school was the "High School Attitude Scale," form A of the Master Attitude Scales by H. H. Remmers and distributed by Purdue University. The scale was untimed,

Educational Motivation

A student's educational (achievement) motivation was uncovered through the use of "Measure of Achieving Tendency," by Albert Mehrabian, an instrument containing 26 short statements about which an individual responds on a scale ranging from very strong agreement to very strong disagreement.

Interest in the Subject

The instrument used to measure a student's interest in school was, "Any School Subject Attitdue Scale," form A of the same Master Attitude Scale by H. H. Remmers. The school subject scale is identical to the "High School Scale" in every respect except, of course, in the nature of the statements.

Rating of the Vocational Instructor

The perceptions that the students had of their instructors (the Subjects) were measured by two sections of the Purdue Teacher Evaluation Scale: "The Ability to Motivate Students," and "Student-Teacher Communication." Each section contained a series of statements regarding a teacher and the respondents were asked to respond to each using four choices ranging from "Like My Teacher," to "Unlike My Teacher."

General Intelligence of the Students

The instrument used to obtain student intelligence was a short, fifteen minute test. The instrument, Science Research Associates Verbal, form A, contains 84 items grouped in twelve clusters of seven items each. Each cluster follows the identical pattern of two analogies, one reading mathematics problem, two vocabulary statements, and two sequential/progression problems. The test yielded three scores: linguistic ability, quantative ability, and a total score. Only the total score was used for the analysis in the study.

DATA ANALYSIS

Each of the dependent variables were compared for any meaningful relationships with the independent variable, teaching enthusiasm. The tool used to obtain this relationship was Pearson's Product-Moment Correlation statistic. Each Subject's class was assigned a mean score for each of the dependent variables and it was this score that was used with the teaching enthusiasm score to obtain the coefficients.

In addition, partial correlations were run to evaluate the influence student intelligence may have had upon the initial correlations. Student intelligence was used as the constant in these additional analyses.

FINDINGS AND ANALYSIS

The comparison between the class mean scores on all the five dependent variables and the independent variable, teaching enthusiasm yielded coefficients ranging from low to non-existent. Additionally, with one exception, all were well beyond the level acceptable for significance. Therefore, all five research hypotheses were rejected and the null hypotheses of no significant relationship were not rejected. Whenever the data supports a failure to reject the null hypotheses, the possibility exists that a Type II error will be committed.

Table 1 lists the coefficients determined in the analysis of the data.

Table 1

Product-Moment Correlations
Determined from a Comparison of
Teaching Enthusiasm and the Mean Scores
of the Five Dependent Variables

	Coefficient	Level of Significance
Teaching Enthusiasm with:		
Attendance Record	r = -.082	p = .301
Interest in School	r = .014	p = .464
Achievement Motivation	r = .197	p = .102
Interest in the Subject	r = -.037	p = .406
Rating of Instructor	r = .248	p = .054

It can be seen from the data contained in Table 1 that only two of the coefficients indicated very modest relationships--Achievement Motivation and Rating of the Vocational Instructor. However, Achievement Motivation was beyond the acceptable level of significance and the Rating of Vocational Instructor was marginally significant. The remaining three showed little or no significant relationships.

Table 2

Partial Correlations between the Hypotheses Variables and the Moderator Variable Student Achievement held as a Constant

Student Intelligence with:	Partial Coefficient	Level of Significance
Teaching Enthusiasm and Attendance Record	$r_{12.3} = -.069$	$p = .300$
Teaching Enthusiasm and Interest in School	$r_{12.3} = .130$	$p = .192$
Teaching Enthusiasm and Achievement Motivation	$r_{12.3} = .188$	$p = .102$
Teaching Enthusiasm and Interest in the Subject	$r_{12.3} = -.030$	$p = .407$
Teaching Enthusiasm and Rating of the Instructor	$r_{12.3} = .240$	$p = .054$

An examination of the data contained in Table 2 will reveal that very little change took place with all the coefficients when all classes were equated on a common variable. In every case, the direction of the coefficient remained unchanged; and, except for the coefficient

representing the relationship between teaching enthusiasm and Interest in School, all exhibited only one or two percentage points above or below the original coefficients. In effect, student intelligence exerted little influence upon the assumptions tendered in the hypotheses.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis of the data, the following are offered as conclusions:

1. Enthusiastic teaching has very little influence on whether or not a student attends school, since vocational students were attending regularly for the enthusiastic as well as the unenthusiastic teachers. Additionally, students with high absentee records were found in the classes of the enthsusiastic and and unenthusiastic alike.
2. Teaching enthusiasm has a slight influence upon the students with the better attendance records since more of such were found in the enthusiastically taught classes while the unenthusiastic classes were mixed with better and poor attendance records.
3. Student intelligence marginally influences whether or not a student attends school, but has no impact when determining the relationship between teaching enthusiasm and attendacne.
4. Most vocational students appear to have a favorable interest in school as indicated by the fact that vocational teachers, whether dull or enthusiastic, appear to have a class mean score at or above the indifference level. That is, more students on the average are interested than disinterested in school.

5. Enthusiastic teaching has very little influence upon a student's interest in school, and in some cases, the influence is inverted. Vocational students found school to be interesting in both the enthusiastically and dull classes.
6. Unenthusiastic teachers appear to have a slight influence upon a student's interest in school since it seems that more unenthusiastic teachers have students who consider school to be uninteresting.
7. A student's intelligence considerably influences his/her interest in school yet exerts little influence on the relationship between teaching enthusiasm and a student's interest in school.
8. An enthusiastic teaching performance slightly affects a student's desire to succeed adademically in school.
9. Vocational students generally seem to be motivated by factors other than academic excellence.
10. An unenthusiastic teaching performance has a greater impact upon achievement motivation since students that are mostly unmotivated are found with the dull teachers while both motivated and unmotivated students can be found with enthusiastic teachers.
11. Student intelligence has virtually no influence on the relationship between teaching style and achievement motivation.

12. Student interest in the subject is largely uneffected by the degree of teaching enthusiasm since both enthusiastic and dull instructors have high and low class means on scores measuring levels of interest.
13. A student's interest in the subject is affected considerably by his/her level of intelligence; however, when intelligence is held constant, it bears little weight upon the influence teaching enthusiasm has on student interest.
14. Most vocational students appear to enjoy their subjects as indicated by the fact that greater than 75 percent of all the students reside in an area above the indifference level, Further, no Subject had a class mean lower than the indifference level.
15. Regardless of the degree of teaching enthusiasm, most students tend to give their instructors a favorable rating.
16. When lower ratings were given, the unenthusiastic teachers received most.
17. Intelligence has an inverse relationship to teacher rating. It appears that the more intelligent students tend to give their instructors a lower rating and the less bright students have a higher regard for their instructors.
18. Student intelligence has no influence on the relationship between the method of teaching and the rating of an instructor.

Discussion

The main thesis of this study was to ferret out the possible educational benefits of the multiple-effects that teaching enthusiasm has upon student achievement. It was established that teaching enthusiasm has a direct effect on student achievement and an attempt was made to determine what influence teaching enthusiasm also has on factors that are known to have a positive effect upon achievement.

Several factors may account for the results in the study. One theory advanced explaining the relationships for two of the hypotheses that were not rejected was that the coefficients may have been spurious since the range of one of the variables to be compared was restricted resulting in a truncated condition. Truncation of one of the variables would result in lower coefficients.

Another theory proposes that vocational students may be readily categorized with unique intellectual, emotional, and socio-economic classes, with such categories affecting their general perceptions toward their participation in a study of this type.

Finally additional details were sought to explain the low coefficients surrounding the dependent variable of achievement motivation. The conclusion was drawn that motivation is very intricate and deserving of separate in-depth treatment.

Recommendations

As a platform to extract additional data and gain insight into the merits of enthusiastic teaching as well as to address the apparent inconsistencies and contradictory results, the following recommendations are offered:

1. Determine both the direct and indirect affect teaching enthusiasm has upon student achievement. Conduct a brief, intensive training session in teaching enthusiasm; and using the participants of the training, instruct them to teach a lesson enthusiastically to one class and dull to another. Additionally, teach one class on a short term and another for a longer unit. Using a factorial analysis of covariance design, analyze the effects of each method of teaching via some measure of achievement with intelligence and SES as the covariates.
2. Replicate the current study with the following alterations: (a) identify considerably more discriminating instruments, (b) to lessen the degree of apathy, administer the instruments with a longer span of time intervening, (c) secure existing data contained in the schools to serve as the constants, (d) identify both enthusiastic and dull instructors in advance so that both extremes are represented, and (e) conduct interviews with selected students involved in the study.

3. Determine the relationship between achievement as the dependent variable and attendance, interest in school and subject, achievement motivation, and rating of vocational instructor as independent variables. Then rate instructors for teaching enthusiasm and conduct a partial correlational analysis using achievement as the constant with the main coefficients between enthusiasm and the various factors.
4. Determine, as a group, which kinds of teachers are enthusiastic, and which are not. Investigate the background of the teachers such as sex, race, number of years of teaching, kinds of degrees held, subject taught, etc. Isolate those factors that contribute significantly to explain why certain teachers are enthusiastic and others are not.

REFERENCES

Berliner, David C., "Impediments to the Study of Teacher Effectiveness," Journal of Teacher Education, Volume XXVII 1976, pages 5-13.

Caulfield, James J., "The Relationship of Motivation, Hostility, and Locus of Control to the Academic Achievement of Eighth Grade Boys," Unpublished Dissertation, The Catholic University of America, 1976.

Chumbley, Ralph B., "Factors Which Predict Academic Achievement for Micronesian College Graduates," Unpublished Dissertation, Florida State University, 1976.

Dunkin, Michael J., and Biddle Bruce J., "The Study of Teaching," (New York: Holt, Rinehart and Winston, 1974).

Eisenhart, William B., "A Search for the Predominant Caused Sequence in the Relationships of Interest in Academic Subjects and Academic Achievement," Unpublished Dissertation, Duke University, 1976.

Mastin, Victor E., "Teacher Enthusism." The Journal of Educational Research, Volume 56 No. 7, March 1963, pages 385-386.

McCarthy, Diane A., "Differences in the Performance of High Achieving and Low Achieving Gifted Pupils in Grades Four, Five and Six on Measures of Field Depedence and Field Independence, Creativity, and Self-Concept," Unpublished Dissertation, University Of Southern California, 1977.

Moorehead, Annette D., "Selected Factors Related to Reading Success in the First Grade," Unpublished Dissertation, University of Arizona, 1977.

Murray, Michael D., "The Relationship of Classroom Behavior to Academic Achievement and Aptitude," Unpublished Dissertation, University of Tennessee, 1977.

Potter, David, "The Relationship of Student Achievement and Student Ratings of Teachers." February 1973 (ED 090 139).

Ramon, Juan, "Some Factors that Influence Academic Achievement." Journal of Reading, Volume 15 No. 6, March 1972, pages 25-28.

Ryans, David G., "Characteristics of Teachers: Their Description, Comparison, and Appraisal." A Research Study for the American Council on Education, Washington, 1960.

Summers, Anita A., and Wolfe, Barbara L., "Which School Resources Help Learning? Efficiency and Equity in the Philadelphia Public Schools." IRCD Bulletin, Volume XI No. 3, Summer 1976, page 1-16.

Trammel, Bobby L, "A comparison of the Personal and Interpersonal Factors Related to the Attendance and Retetention Rates of Adults at a community College," Unpublished Dissertation, University of Oklahoma, 1977.

Unruh, Walter R., "The Modality and Validity Cues to Lecture Effectiveness." N. L. Gage (Ed.) Exploration of the Teacher's Effectiveness in Explaining, Stanford University, 1968.

Walter, E. Dix, "Relationship Between Selected Family Variables for Student Achievement in School," Unpublished Dissertation, Columbia University Teachers College, 1977.

White, Karl, R., "The Relationship Between Socio-Economic Status and Academic Achievement," Unpublished Dissertation, University of Colorado at Boulder, 1976.

Williams, Alvin W., "An Investigation of Relationships Among Selected Discipline Problems, Achievement Grades Assigned by Teachers, Attendance, and Achievement as Measured by Standardized Tests in Math," Unpublished Dissertation, University of Houston, 1976.

Wimbush, George W., "A Study of Prediction of Academic Achievement in Fifth Grade Math and Certain Intellectual and Non-intellectual Variables Measured in Grades One and Three within Certain Ethnic Groups," Unpublished Dissertation, University of Houston, 1976.